

Soil and Water Remediation, Groundwater/Vadose Zone (RL-0030)

**R. T. Wilde, Vice President of Solid and Waste
Water Remediation/Groundwater Vadose Zone
and Waste Sampling and Characterization
Facility/(509) 372-8123**



CCL4 Pump and Treat System

Overview

This section addresses Project Baseline Summary (PBS) RL-0030, *Soil and Water Remediation Groundwater/Vadose Zone*.

NOTE: Unless otherwise noted, all information contained herein is as of the end of June 2006.

Notable Accomplishments

Well Drilling: All fifteen of the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement [TPA])-required Calendar Year (CY) 2006 wells are complete, as are ten of the CY 2007 wells. One TPA well is in progress. In non-TPA drilling, two wells are in progress for bio-remediation studies at 100-H, and support is being provided to the Office of River Protection and Pacific Northwest National Laboratory (PNNL) to drill four deep seismic boreholes needed for Vitrification Plant construction. Fourteen TPA and non-TPA wells are in planning for late spring/summer drilling.

Cleaning up Chromium Along the River: In the 100-K Area, the design for a new chromium pump-and-treat system near the K West Reactor is complete. Procurement of the building and balance of plant is in progress. Construction should begin in early August, with the treatment skid to be delivered to the site in mid-August. Near the end of June, RL formally authorized activities to expand the existing treatment system in the 100-K Area to augment the existing redox manipulation barrier in 100-D with micron-sized iron, and to perform a treatability test of a new technology for chromium cleanup (electrocoagulation) in the 100-D Area.

Decommissioning Old, Unused Wells: A contract awarded in March to decommission sixty-four wells using mechanical casing perforation techniques was completed in June, three months ahead of schedule. One well was removed from the contract because it was found to have a kink, or bend, in the casing that prevented the mechanical perforating equipment from being inserted down the well.

Cleaning Up Strontium-90 Along the River: A pilot test was initiated on May 31, 2006, to evaluate injection of a phosphate mineral into the 100-N groundwater to create a barrier that will grab onto strontium-90 and hold it in place as it naturally decays. The test successfully demonstrated that the phosphate could be injected from a single well out to all the test monitoring wells, that the microbes in the aquifer quickly respond and break down the citrate coating on the phosphate to allow it to drop out into the aquifer, and that a rapid decrease in strontium-90 occurs in the injection well. Of concern was an increase in strontium-90 in a number of the monitoring wells. The current belief is that the phosphate solution has ions that compete with strontium until they naturally flush out of the system. The solution chemistry is being adjusted to minimize or delete the potential for this effect, and another pilot test will be run later in this fiscal year in another well in the barrier.

FY 2006 Funds vs. Spend Forecast (\$M)

	Projected FY 2006 Funding	FY 2006 Fiscal Year Spend Forecast	Variance
Soil & Water Remediation, Groundwater/Vadose Zone	\$ 48.1	\$ 47.9	\$ 0.2

FY 2006 Schedule/Cost Performance (\$M)

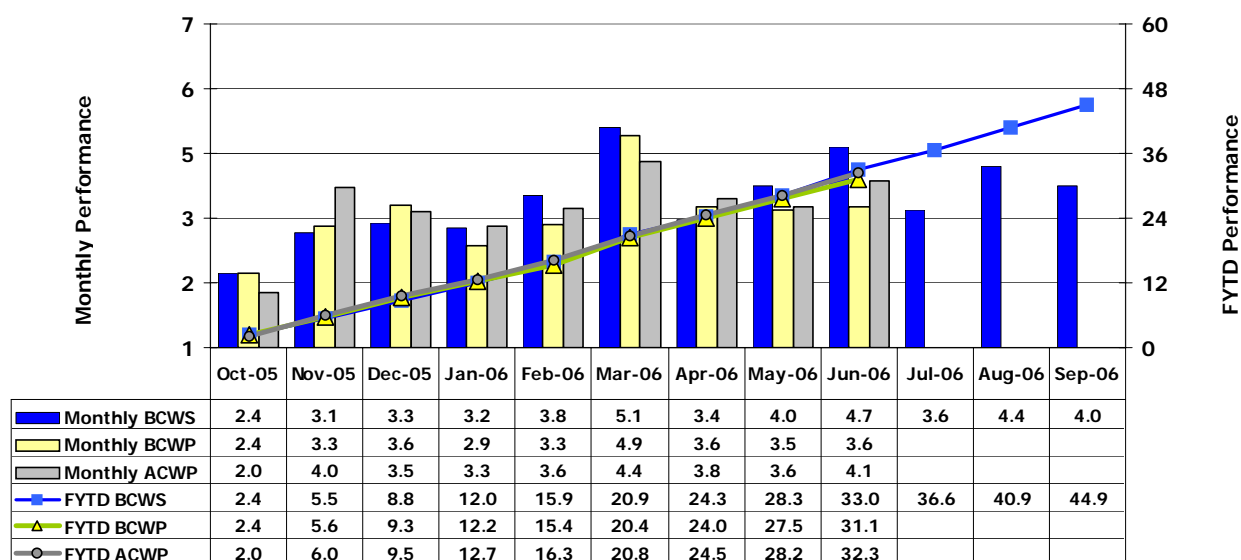
	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance \$	Schedule Variance %	Cost Variance \$	Cost Variance %	Budget At Completion
Soil & Water Remediation, Groundwater/Vadose Zone	\$33.0	\$31.1	\$32.3	-\$1.9	-5.7%	-\$1.1	-3.7%	\$44.9

Numbers are rounded to the nearest \$0.1M and include the Closure Services allocation.

Schedule Performance (-\$1.9M/-5.7%). Variance within threshold; no explanation required.

Cost Performance (-\$1.1M/-3.7%). Variance within threshold; no explanation required.

Performance Analysis FYTD and Monthly (\$M)



Milestone Achievement

Number	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status/Comments
M-24-57G	Install a Cumulative of 45 Wells by December 31, 2005	RL	12/31/05	8/16/05		Complete
M-24-57J	Install a Cumulative of 45 Wells by December 31, 2006	RL	12/31/06	5/11/06		Complete
M-15-48A	Submit Draft A 200-ZP-1 CERCLA Remedial Investigation Report to EPA	RL	5/31/06	5/31/06		Complete